

WHAT IS CLAIMED IS:

1. An endoscope in which a therapeutic instrument
insertion channel is provided in an insertion portion
inserted into a celoma and an end opening portion of
5 said therapeutic instrument insertion channel is
provided in the vicinity of an end of said insertion
portion,

wherein a guide wire for guiding an insertion
operation of a therapeutic instrument is inserted into
10 said therapeutic instrument insertion channel; and

said insertion portion has a guide wire fixing
means for releasably engaging said guide wire when said
therapeutic instrument running on said guide wire is
inserted/removed with an end portion of said guide wire
15 being led out from said end opening portion of said
therapeutic instrument insertion channel.

2. The endoscope according to claim 1, wherein
said guide wire fixing means is provided in the
vicinity of said distal end portion of said insertion
20 portion.

3. The endoscope according to claim 1, wherein
said guide wire fixing means is constituted by
a therapeutic instrument elevator base provided in
the vicinity of said end opening portion of said
25 therapeutic instrument insertion channel and a
constituent member provided at a opposed position when
said therapeutic instrument elevator base is raised.

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4. The endoscope according to claim 3, wherein
a slit capable of engaging only said guide wire by
raising said guide wire by manipulating said
therapeutic instrument elevator base is provided at
5 a top portion of a guide plane of said therapeutic
instrument elevator base.

6. The endoscope according to claim 4, wherein
said slit is provided on a top face of an opening
portion of said therapeutic instrument insertion
10 channel of a distal end hard portion.

7. The endoscope according to claim 4, further
comprising a wire contact plane provided on a top
portion of said opening portion of said therapeutic
instrument insertion channel, wherein when said
15 elevator base is swiveled and raised and said guide
wire is held/fixed between said slit and said wire
contact plane, a contact portion between said wire
contact plane and said guide wire on the leading end
side is positioned on the base end side away from
20 a swiveling shaft of said elevator base.

8. The endoscope according to claim 4, wherein
a protrusion portion through which the outside diameter
of said guide wire which has been elastically deformed
passes when said elevator base is swiveled and raised
25 is provided to an opening portion of said slit, and
a space in which the outside diameter of said guide
wire is held in cooperation with said protrusion

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portion is formed inside said slit.

8. The endoscope according to claim 7, wherein said protrusion portion is provided on the both sides of said opening portion of said slit.

5 9. The endoscope according to claim 7, wherein said protrusion portion is provided in an axial direction of an insertion portion of said opening-
portion of said slit over the entire length.

10 10. The endoscope according to claim 4, wherein a slit having two opposed wall surfaces is provided on the top portion of said guide plane of said therapeutic instrument elevator base, and only said guide wire is fixed when said wall surfaces are brought into contact with only the outer periphery of said guide wire.

15 11. The endoscope according to claim 4, wherein a width of said opening portion of said slit is larger than an outside diameter of said guide wire and smaller than an outside diameter of said therapeutic instrument externally attached to said guide wire.

20 12. The endoscope according to claim 4, wherein a central axis of said slit with respect to an axial direction of said insertion portion is inclined relative to a central axis of said guide plane.

25 13. The endoscope according to claim 4, wherein an intermediate stopper for stopping the operation of said operation member halfway at a position in a predetermined operation range from start of raising

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said therapeutic instrument elevator base is provided,
and further comprising operating means for releasing
said intermediate stopper to enable the operation in
the full operation range of said therapeutic instrument
5 elevator base.

14. The endoscope according to claim 13, wherein
a plurality of said intermediate stoppers are provided.

15. The endoscope according to claim 13, wherein
said operating means includes a protrusion portion
10 provided to said operation member and an elastic member
engaging with a protrusion portion.

16. The endoscope according to claim 4, wherein,
when said elevator base is swiveled to be lowered,
a height of a wall surface of an accommodation chamber
15 of said therapeutic instrument elevator base opposed to
said slit is higher than a bottom surface of said slit.

17. The endoscope according to claim 3, wherein
a wire contact plane provided at the upper portion of
an opening portion of said therapeutic instrument
20 insertion channel is included, a contact portion of
said therapeutic instrument elevator base and said
guide wire on the leading end side is positioned on
the base end side away from a swiveling axis of said
elevator base when said elevator base is swiveled and
25 raised and said guide wire is held/fixed between said
elevator base and said wire contact plane.

18. The endoscope according to claim 3, wherein

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an intermediate stopper for stopping the operation of
said operation member halfway at a position in a
predetermined operation range from start of raising
said therapeutic instrument elevator base is provided,
5 and said endoscope further comprises operating means
for releasing said intermediate stopper to enable
the operation in the full operation range of said
therapeutic instrument elevator base.

19. The endoscope according to claim 18, wherein
10 a plurality of said intermediate stoppers are provided.

20. The endoscope according to claim 18, wherein
said operating means includes a protrusion portion
provided to an operating member and an elastic member
engaging with said protrusion portion.

15 21. The endoscope according to claim 3, wherein
an operation portion is connected to a front side
end portion of the insertion portion inserted into
a celoma, the end opening portion of the therapeutic
instrument insertion channel provided in said insertion
20 portion is arranged at a distal end portion of said
insertion portion, the elevator base for swiveling
around a swiveling shaft provided at a lower portion of
said endoscope on the distal end side to raised/lowered
said therapeutic instrument, an operation lever capable
25 of operating said elevator base, and a towing member
having one end fixed to said elevator base and the
other end fixed to a rotator integrally swiveling

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coaxially with said operation lever are provided; and

wherein a swivel deterrent body which is provided oppositely to said rotator and suppresses swiveling of said rotator and a deterrence reinforcement mechanism for increasing the deterrence by the deterrent body when said rotator rotates by the predetermined amount are provided between said rotator and said deterrent body.

22. The endoscope according to claim 3, wherein said constituent member is formed by a high friction resistance portion.

23. The endoscope according to claim 22, wherein said high friction resistance portion is formed by embedding, for example, rubber or an elastic member having a high friction resistance.

24. The endoscope according to claim 22, wherein said high friction resistance portion is formed by embedding a magnet.

25. The endoscope according to claim 22, wherein a detachable distal end cover in said endoscope is formed by an elastic member, and said high friction resistance portion is formed by extending said elastic member to a position at which said distal end cover is opposed to said therapeutic instrument elevator base.

26. The endoscope according to claim 3, wherein a guide wire engagement groove in which said guide wire is fitted in is provided on a side wall of an

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accommodation chamber of said therapeutic instrument elevator base.

27. The endoscope according to claim 26, wherein a width of said guide wire engagement groove is such that said guide wire can be elastically deformed and held in said guide wire engagement groove by pressing said guide wire between a side surface of said therapeutic instrument elevator base and said guide wire engagement groove.

28. The endoscope according to claim 26, wherein a guide wall for leading said guide wire to said guide wire engagement groove when said therapeutic instrument elevator base is raised is provided on a guide plane of said therapeutic instrument elevator base.

29. The endoscope according to claim 26, wherein said guide wire engagement groove is provided at a position where said guide wire is fixed so as to be inclined in the direction along which an object optical system is arranged.

30. The endoscope according to claim 3, further comprising:

a first impetus giving member fixed on a proximal operation portion side of said therapeutic instrument channel opening portion at the distal end of said endoscope;

a second impetus giving member which is arranged beside said first impetus giving member and can move

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substantially vertically to an axis of said insertion portion of said endoscope;

a roller for thrusting said second impetus giving member to said first impetus giving member side;

5 guide wire fixing means constituted by an elastic member arranged between said first impetus giving member and said second impetus giving member; and -
operating means for towing said roller.

31. The endoscope according to claim 1, wherein
10 said guide wire fixing means is arranged in the vicinity of said therapeutic instrument elevator base provided at a distal end of said insertion portion.

32. The endoscope according to claim 31, further comprising operation transmitting means includes an
15 operation lever provided to said operation portion and an operation wire having one end connected to said operation lever and the other end connected to said guide wire fixing means.

33. The endoscope according to claim 32, wherein
20 a rotating shaft of said operation lever is provided at a position different from the rotating shaft of elevator base raised lever.

34. The endoscope according to claim 33, wherein
25 said rotating shaft of said operating lever is provided at a position which is substantially orthogonal to said rotating shaft of said therapeutic instrument elevator base raised lever.

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35. The endoscope according to claim 33, wherein
said rotating shaft of said therapeutic instrument
elevator base raised lever is provided on an axis which
is substantially orthogonal to a central axis of said
insertion portion, and said rotating shaft of said
5 operation lever is provided on an axis which is
substantially parallel to said central axis of said
insertion portion.

36. The endoscope according to claim 33, wherein
10 a therapeutic instrument insertion opening for leading
said therapeutic instrument to said therapeutic
instrument insertion channel is provided to a grip for
holding said operation portion, and said operation
lever is provided at an end portion of said grip on
15 said insertion portion side.

37. The endoscope according to claim 33, wherein
said therapeutic instrument set-up lever is provided on
the front side away from said grip and said operation
lever is provided on said insertion portion side away
20 from said grip.

38. The endoscope according to claim 31, wherein
said guide wire fixing means has a snare shape.

39. The endoscope according to claim 38, wherein
a fixing member which can temporarily fix said guide
25 wire fixing means is provided to said endoscope in
the vicinity of said opening portion side of said
therapeutic instrument insertion channel.

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40. The endoscope according to claim 31, wherein said guide wire fixing means has a hook-like shape.

41. The endoscope according to claim 40, further comprising:

5 a fixing portion for fixing said guide wire;
a guide wire fixing member consisting of an arm portion provided on the base end side of said fixing portion and a support shaft for swiveling and supporting said arm portion so as to be orthogonal to
10 said arm portion;

a swivel mechanism for swiveling said support shaft of said guide wire fixing member; and

a tow wire which is inserted into said insertion portion of said endoscope in order to remotely operate
15 said swivel mechanism,

wherein said fixing member is brought into contact with an outside diameter portion of said guide wire and held and fixed between said outside diameter portion and a main body portion of said insertion portion at
20 the end thereof by swiveling said arm portion.

42. The endoscope according to claim 41, wherein at least said support shaft and said swivel mechanism are water-tightly arranged inside said distal end hard portion of said endoscope.

25 43. The endoscope according to claim 31, wherein a guide wire fixing elevator base capable of moving to an engagement position where said guide wire which is

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inserted into said therapeutic instrument insertion
channel and guides said therapeutic instrument is
releasably engaged and an engagement releasing position
where engagement of said guide wire is released is
5 provided at said end portion of said insertion portion
as said guide wire fixing means.

44. The endoscope according to claim 43, wherein
operating means for operating engagement or release
of said guide wire by said guide wire fixing elevator
10 base is provided to said operation portion of said
endoscope.

45. The endoscope according to claim 43, wherein
said guide wire is held and fixed by a wall surface
portion of a therapeutic instrument insertion path
15 arranged at the distal end of said endoscope and said
guide wire fixing elevator base.

46. The endoscope according to claim 43, wherein
said guide wire fixing elevator base is provided on
said therapeutic instrument elevator base for raising
20 said therapeutic instrument in the direction of
a visual field.

47. The endoscope according to claim 43, wherein
an opening portion is provided on a guide plane of said
therapeutic instrument elevator base on which said
25 therapeutic instrument is arranged, and said guide
wire fixing elevator base is provided at said opening
portion.

48. The endoscope according to claim 43, wherein
said guide wire fixing elevator base is provided in
such a manner that a guide plane of said guide wire
fixing elevator base is smoothly connected to that of
5 said therapeutic instrument elevator base when said
guide wire fixing elevator base is lowered.

49. The endoscope according to claim 43, wherein
a raised angle of said guide wire fixing elevator base
exceeds that of said therapeutic instrument elevator
10 base.

50. The endoscope according to claim 43, wherein
an elastic member is provided at a guide wire contact
position provided when said guide wire is fixed by said
guide wire fixing elevator base.

51. The endoscope according to claim 43, wherein
a protrusion is provided at a guide wire contact
15 position of said elevator base provided when said guide
wire is fixed by said guide wire fixing elevator base.

52. The endoscope according to claim 31, further
20 comprising:

a biasing member capable of moving in the
direction which is substantially vertical to said
therapeutic instrument insertion path at said distal
end portion of said endoscope;

25 guide wire fixing means constituted by a spring
material assisting movement of said biasing member; and
operation transmitting means enabling operation of

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fixation and release of said guide wire by said guide wire fixing means.

53. The endoscope according to claim 52, wherein said guide wire fixing means is constituted by providing a torque transmission member between said biasing member and said operation transmitting means.

54. The endoscope according to claim 31, wherein said guide wire fixing means is constituted by fixing an end portion of a fixing operation wire projecting from a guide pipe provided to said endoscope in the vicinity of said opening portion of said therapeutic instrument insertion channel on the end side.

55. The endoscope according to claim 54, wherein an end portion of said guide wire fixing means is fixed so as to be capable of swiveling.

56. The endoscope according to claim 1, wherein said guide wire fixing means is included in the vicinity of the distal end of said insertion portion.

57. The endoscope according to claim 1, wherein said guide wire fixing means is arranged in the vicinity of said opening.

58. The endoscope according to claim 57, wherein said guide wire fixing means is arranged at a position which is in contact with the vicinity of the surface of said insertion portion or a position in the vicinity of the surface and a position away from an observation window arranged at the end of said insertion portion.

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59. The endoscope according to claim 1, wherein said guide wire fixing means is constituted detachably with respect to said insertion portion.

5 60. The endoscope according to claim 59, wherein said guide wire fixing means is constituted detachably with respect to the distal end of said insertion portion.

10 61. The endoscope according to claim 59, further comprising an attachment mechanism for attaching said guide wire fixing means to said insertion portion.

62. The endoscope according to claim 61, wherein said attachment mechanism consists of soft resin such as chloroethene or rubber.

15 63. The endoscope according to claim 61, wherein said attachment mechanism has a positioning member consisting of a convex portion which is fitted in said opening of said therapeutic instrument insertion channel.

20 64. The endoscope according to claim 61, wherein said attachment mechanism has a length extending from at least the distal end of said insertion portion to said guide wire fixing means for covering a protrusion portion provided to said guide wire fixing means, and has a mucous protection portion from which corners are
25 eliminated as a whole.

65. The endoscope according to claim 61, wherein said attachment mechanism includes: an attachment

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portion formed into a substantially cylindrical shape;
a wall thickness varying portion formed so as to be
wall-thick toward one end in the axial direction in
said attachment portion; at least one slit which is
5 provided to said wall thickness varying portion and has
an opening on said one end side; and a ring member
-capable of moving on at least an outer peripheral-
portion of said wall thickness varying portion in the
axial direction in said attachment portion, said wall
10 thickness varying portion being fitted to the distal
end of said insertion portion in said endoscope.

66. The endoscope according to claim 59, further
comprising a guide wire fixing member insertion channel
having at the end thereof a first opening portion which
15 is opened at the distal end of said therapeutic
instrument insertion channel and a second opening
portion which is opened in the vicinity of said first
opening portion, wherein said guide wire fixing means
for holding/fixing said guide wire extended from said
20 first opening portion is extended from said second
opening portion in order to guide said therapeutic
instrument to said therapeutic target part.

67. The endoscope according to claim 66, wherein
a distal end portion of said guide wire fixing means
25 has a snare shape.

68. The endoscope according to claim 66, wherein
a distal end portion of said guide wire fixing means

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has a hook shape consisting of a soft member.

69. The endoscope according to claim 1, wherein
said guide wire fixing means has guide wire fixing
portions which are at least two movable members
5 arranged substantially in parallel to each other and
can move in the direction along which said portions
move close to each other and the direction along which
said portions move away from each other.

70. The endoscope according to claim 69, wherein
10 said two guide wire fixing portions sandwich and fix
said guide wire therebetween when said guide wire
fixing portions move close to each other.

71. The endoscope according to claim 1, wherein
15 said guide wire fixing means is arranged so as to cut
across an opening of said therapeutic instrument
insertion channel in the vicinity of said opening,
attached in the longitudinal direction of said
insertion portion so as to be capable of moving in
the direction along which it moves close to said
20 therapeutic instrument elevator base provided at said
distal end portion of said endoscope and the direction
along which it moves away from the same, and has on its
plane opposed to said therapeutic instrument elevator
base a guide wire fixing portion having a part with
25 which said guide wire is brought into contact.

72. The endoscope according to claim 1, wherein
said guide wire fixing means consists of at least one

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loop-like member, and a loop diameter of said loop-like member can be enlarged and decreased.

5 73. The endoscope according to claim 1, wherein said guide wire fixing means has a groove whose width is smaller than the outside diameter of said guide wire in some measure on its plane opposed to said therapeutic instrument elevator base arranged at the distal end of said insertion portion.

10 74. The endoscope according to claim 1, wherein said guide wire fixing means has a guide wire fixing portion having irregularities formed thereto on its plane with which said guide wire is brought into contact.

15 75. The endoscope according to claim 74, wherein said guide wire fixing portion consists of a pair of guide wire fixing members sandwiching said guide wire therebetween.

20 76. The endoscope according to claim 75, wherein, in said irregularities, convex portions in one guide wire fixing member are fitted in concave portions in the other guide wire fixing member.

 77. The endoscope according to claim 74, wherein said irregularities consist of steps which are substantially orthogonal to said guide wire.

25 78. The endoscope according to claim 1, wherein a material which consists of an elastic member such as rubber and has the large friction resistance is

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arranged on a plane of said guide wire fixing means with which said guide wire is brought into contact.

5 79. The endoscope according to claim 1, wherein said guide wire fixing means is arranged in a transparent substantially-cylindrical member having a therapeutic instrument insertion opening portion through which said therapeutic instrument projecting from the opening of said therapeutic instrument insertion channel can pass.

10 80. The endoscope according to claim 1, wherein said guide wire fixing means has a guide wire identification mechanism for identifying said guide wire and said therapeutic instrument other than said guide wire.

15 81. The endoscope according to claim 80, wherein said guide wire identification mechanism has a protrusion portion having at least a part which protrudes on the opening of said therapeutic instrument insertion channel so as to be capable of moving forward and backward.

20 82. The endoscope according to claim 81, wherein said guide wire identification mechanism has a protrusion portion which protrudes on the opening of said therapeutic instrument insertion channel from the base end side in the longitudinal direction of said insertion portion so as to be capable of moving forward and backward, and said protrusion portion has a gap

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whose width is larger than the diameter of said guide wire on a side opposed to said guide wire.

5 83. The endoscope according to claim 80, further comprising a guide wire fixing member or a guide wire identification member which can move with respect to said guide wire fixing means and to which impetus is given at a first position where said guide wire is fixed by an elastic member or a second position where said therapeutic instrument other than said guide wire
10 can be inserted.

15 84. The endoscope according to claim 83, wherein said guide wire fixing means has a click mechanism which can engage at least one of said guide wire fixing member or said guide wire identification member at said first position or said second position.

85. The endoscope according to claim 84, wherein said click mechanism consists of a click pin and a click groove for guiding said click pin.

20 86. The endoscope according to claim 85, wherein said click groove has a step for preventing reverse rotation of said click pin.

25 87. The endoscope according to claim 86, wherein said click pin is rotatably attached to a moving member consisting of at least either said guide wire fixing member or said guide wire identification member, and there are provided a hole in which said click pin is fitted when said moving member reaches the vicinity of

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the opposite side to that where impetus is given and
a step for preventing reverse rotation at a turnback
point in said click groove in such a manner that
an outward route and an inward route of said click pin
are different from each other when said moving member
reciprocates between said first position and said
second position.

88. The endoscope according to claim 85, wherein
said click pin is rotatably attached to a moving member
consisting of at least either said guide wire fixing
member and said guide wire identification member, said
endoscope includes one convex portion provided on the
side where impetus is given to said guide wire fixing
portion, a first convex portion and a second convex
portion provided on the opposite side to the side where
impetus is given and a concave portion provided between
said two convex portions, and steps for preventing
reverse rotation are provided at all turnback points in
such a manner that an outward route and an inward route
of said click pin are different from each other when
said guide wire fixing portion reciprocates between
said first position and said second position.

89. The endoscope according to claim 80, wherein
said guide wire fixing means interlocks with said guide
wire identification mechanism.

90. The endoscope according to claim 89, wherein
said guide wire fixing means has a part which is caught

by said guide wire identification mechanism portion.

91. The endoscope according to claim 1, further comprising operating means for operating said guide wire fixing means.

5 92. The endoscope according to claim 91, wherein said operating means is provided to said operation portion of said endoscope.

10 93. The endoscope according to claim 91, wherein a transmission mechanism for transmitting the operation of said operating means is provided between said operating means and said guide wire fixing means.

15 94. The endoscope according to claim 93, wherein said transmission mechanism is an operation wire arranged in said therapeutic instrument insertion channel.

20 95. The endoscope according to claim 93, wherein said transmission mechanism is arranged in an external channel provided between the vicinity of the distal end of said insertion portion and the front side along the side surface of said endoscope.

96. The endoscope according to claim 95, wherein said transmission mechanism is an operation wire arranged in said external channel.

25 97. The endoscope according to claim 91, wherein a member for fixing said operation wire is provided in the vicinity of the base end of a bending portion in said endoscope.

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98. The endoscope according to claim 91, wherein said operating means and said endoscope operation portion are arranged so as to be distanced from each other.

5 99. An endoscope comprising:

an insertion portion inserted into a celoma;

an operation portion connected to a proximal end portion of said insertion portion; and

10 a therapeutic instrument elevator base which is arranged at the distal end portion of said insertion portion and can be operated by said operation portion,

15 wherein a slit which can engage only a guide wire by raising said guide wire by operating said therapeutic instrument elevator base is provided at a top portion on a guide plane of said therapeutic instrument elevator base.

20 100. The endoscope according to claim 99, wherein a slit having two opposed wall surfaces is provided on the top portion of said guide plane of said therapeutic instrument elevator base, and only said guide wire is fixed when said wall surfaces are brought into contact with only the outer periphery of said guide wire.

25 101. The endoscope according to claim 99, wherein a width of an opening portion of said slit is larger than the outside diameter of said guide wire and smaller than the outside diameter of a therapeutic instrument externally attached to said guide wire.

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102. The endoscope according to claim 99, wherein said slit is provided on the top face of a therapeutic instrument insertion channel opening portion of an end hard portion in said endoscope.

5 103. The endoscope according to claim 99, wherein a wire contact plane is provided on the top portion of the opening portion of said therapeutic instrument insertion channel provided at the distal end of said endoscope, a contact portion of said slit and said
10 guide wire on the leading end side is positioned on the base end side away from a swiveling shaft of said elevator base when said elevator base is swiveled and raised and said guide wire is held/fixed between said slit and said wire contact plane.

15 104. The endoscope according to claim 99, further comprising an object optical system at the distal end portion of said endoscope, wherein said object optical system is set in such a manner that a part of said therapeutic instrument elevator base exists in an
20 observation visual field when said guide wire is fixed and a part of said guide wire which is fixed and enters said observation visual field is focused.

25 105. The endoscope according to claim 99, wherein a protrusion portion through which the outside diameter of said guide wire passes after being elastically deformed when said elevator base is swiveled and raised is provided at the opening portion of said slit, and

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a space in which the outside diameter of said guide wire is held in cooperation with said protrusion portion is formed inside said slit.

5 106. The endoscope according to claim 105, wherein said protrusion portion is provided on both sides of the opening portion of said slit.

10 107. The endoscope according to claim 105, wherein said protrusion portion is provided in the axial direction of said insertion portion of said opening portion of said slit over the entire length.

15 108. The endoscope according to claim 99, wherein an intermediate stopper for stopping the operation of said operation member of said therapeutic instrument elevator base halfway at a position in a predetermined operation range from start of raising said therapeutic instrument elevator base is provided, and said endoscope further includes operating means which can release said intermediate stopper and enables operation in the full operation range of said operation member.

20 109. The endoscope according to claim 108, wherein a plurality of said intermediate stopper are provided.

25 110. The endoscope according to claim 108, wherein said operating means consists of a protrusion portion provided to said operation member and an elastic member engaging with said protrusion portion.

111. The endoscope according to claim 99, wherein, when said elevator base is swiveled and lowered,

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a height of a wall surface of an accommodation chamber of said therapeutic instrument elevator base opposed to said slit is higher than a bottom surface of said slit.

5 112. The endoscope according to claim 99, wherein said therapeutic instrument elevator base has a guide plane which is opposed to the opening portion of said therapeutic instrument insertion channel and guides
10 said therapeutic instrument, another plane facing the distal end of said endoscope and a connection plane for smoothly connecting said guide plane with another plane, and said slit is provided on said connection plane or from said connection plane to another plane.

15 113. The endoscope according to claim 99, wherein a central axis relative to an axial direction of the insertion portion of said slit is inclined with respect to a central axis of said guide plane.

114. An endoscope system comprising:

20 an endoscope in which a therapeutic instrument insertion channel is provided in an insertion portion inserted into a celoma, an opening portion at the distal end of said therapeutic instrument insertion channel is provided in the vicinity of the distal end of said insertion portion and a therapeutic instrument
25 insertion opening as an opening portion of said therapeutic instrument insertion channel is provided on the proximal side of an operation portion;

a guide wire which can pass through said

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therapeutic instrument insertion channel; and

a therapeutic instrument which has a pipe through
which said guide wire can pass and which can be
inserted into said therapeutic instrument insertion
5 channel,

wherein said therapeutic instrument has a
-protrusion length from said distal end opening portion
which is required for treatment and a protrusion length
from said therapeutic instrument insertion opening
10 which is required for operation on the proximal side
with said therapeutic instrument being inserted into
said therapeutic instrument insertion channel, guide
wire fixing means for releasably engaging said guide
wire when inserting/removing said therapeutic
15 instrument running on said guide wire with the distal
end portion of said guide wire inserted through said
therapeutic instrument insertion channel being led out
from said distal end opening portion is provided in the
vicinity of the distal end portion of said insertion
20 portion, and said guide wire has a length projecting
from the proximal end portion of said therapeutic
instrument with the end portion of said therapeutic
instrument being drawn to the front side of said
operation portion from said engagement position and
25 engaged by said guide wire fixing means.

115. The endoscope system according to claim 114,
wherein a slit which can engage only said guide wire by

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raising said guide wire by operating a therapeutic instrument elevator base provided in the vicinity of the end opening portion of said therapeutic instrument insertion channel is provided on a top portion on a guide plane of said therapeutic instrument elevator base.

116. The endoscope system according to claim 115, further comprising a protrusion portion provided on an upper portion of the opening portion of said therapeutic instrument insertion channel, wherein a contact portion of said protrusion portion and said guide wire on the leading end side is positioned on the base end side away from a swiveling shaft of said elevator base when said elevator base is swiveled and raised and said guide wire is held/fixed between said slit and said protrusion portion.

117. The endoscope system according to claim 115, wherein an intermediate stopper for stopping the operation of said operation member halfway at a position in a predetermined operation range from start of raising said therapeutic instrument elevator base is provided, and said endoscope system further includes operating means which releases said intermediate stopper and can operate in the full operation range of said operation member.

118. The endoscope system according to claim 117, wherein said operating means consists of a protrusion

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end portion of said therapeutic instrument being pulled to said operation side on the proximal side from said engagement position and said guide wire being fixed to said guide wire fixing means.

5 124. The endoscope system according to claim 114, wherein a protrusion length of said therapeutic instrument from said therapeutic instrument insertion opening is set to 30 to 60 cm in the state where the end portion of said therapeutic instrument is pulled to
10 said operation portion side on the front side from said engagement position and said guide wire is engaged by said guide wire fixing means, and a length of said guide wire protruding from the proximal side of said therapeutic instrument in the same state is set to not
15 more than 20 cm.

125. An endoscope comprising an endoscope auxiliary instrument attachment mechanism consisting of a belt-like member wound around said insertion portion.

20 126. An endoscope comprising an endoscope auxiliary instrument attachment mechanism consisting of at least two substantially cylindrical members, so that a second substantially cylindrical member is movably arranged inside a first substantially cylindrical member.

25 127. The endoscope according to claim 126, wherein at least one of an inside diameter, an outside diameter and a wall thickness in each of said two substantially cylindrical members is unevenly formed.

128. The endoscope according to claim 126, wherein
the inside diameter at one end of said first
substantially cylindrical member is widened in the
tapered shape so that it gradually increases toward
5 the opening portion, and the outside diameter at one
end of said second substantially cylindrical member is
narrowly formed in the tapered shape so that it is
gradually reduced toward the opening portion.

129. The endoscope according to claim 126, wherein
10 at least one slit is provided to said second
substantially cylindrical member.

130. The endoscope according to claim 126, wherein
an engagement mechanism such as a click, a screw or
a fitting groove is provided so that said second
15 substantially cylindrical member can be temporarily
held so as to be thrust down in said first
substantially cylindrical member.

131. An endoscope auxiliary instrument attachment
member comprising:

20 an attachment portion formed into a substantially
cylindrical form;

a wall thickness varying portion which is formed
so as to be gradually wall-thick toward one end of said
attachment portion in the axial direction;

25 at least one slit which is provided to said wall
thickness varying portion and has an opening on said
one end side; and

FOOTNOTES

a ring member which can move on at least an outer peripheral part of said wall thickness varying portion in the axial direction in said attachment portion,

5 wherein said wall thickness varying portion is fitted to a distal end of an insertion portion in an endoscope.

132. A method for endoscopically performing -- diagnosis or treatment by using a guide wire,

said method comprising:

10 a step for inserting said guide wire into a guide wire insertion lumen of a therapeutic instrument inserted into an endoscope;

a step for gripping and fixing said guide wire on an endoscope operation portion side and pulling back said therapeutic instrument after confirming that said 15 guide wire has secured a lumen;

a step for fixing said guide wire at a distal end of an insertion portion of said endoscope by using a guide wire fixing member after that a distal end of said therapeutic instrument has been pulled back to the 20 inside of said insertion portion of said endoscope; and

a step for completely pulling out said therapeutic instrument from said endoscope after confirming that said guide wire has been fixed.

25 133. The method for performing diagnosis or treatment according to claim 132, wherein the operation for fixing said guide wire or for releasing fixation of

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the same is carried out by operating means arranged at said operation portion of said endoscope.

134. A method for endoscopically performing diagnosis or treatment by using a guide wire,

5 said method comprising:

 a step for confirming that said guide wire is fixed by a guide wire fixing member at a distal end of an insertion portion of an endoscope;

10 a step for inserting a base end side of said guide wire into a guide wire insertion lumen of a therapeutic instrument;

 a step for inserting said therapeutic instrument into said endoscope;

15 a step for releasing fixation by said guide wire fixing member after confirming that a distal end of said therapeutic instrument has been inserted to the vicinity of the distal end of said insertion portion of said endoscope;

20 a step for gripping and fixing an endoscope operation portion side of said guide wire; and

 a step for further inserting said therapeutic instrument along said guide wire;

25 135. The method for performing diagnosis or treatment according to claim 134, wherein the operation for fixing said guide wire or releasing fixation of the same is carried out by operating means arranged to said operation portion of said endoscope.

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